

Correct weaponeering utilizing JMPS CUPC, JAWS, current flight clearances, and AV-8B NATIP.
Execute briefed air-to-surface timeline.
Proper use of TPOD to generate target coordinates.
Comply with Tactical Abort Parameters.
Valid weapon release IAW Air NTTP 3-22.1-AV8B.
Weapon impacts within CEP.
Correct ALSA Communication Brevity.

Prerequisite. NS-254.

Ordnance. TPOD, 2 LGTR, LGB, or JDAM, free fall ordnance, and expendables.

Range Requirements. RSTD, LGB or JDAM, WISS or RKD, RNG, EXP.

7. Air-to-Air (AA)

a. Purpose. Complete ACM qualification.

b. General

(1) All training shall be conducted IAW NAVMC DIR 3500.14, Aviation Training and Readiness Manual ACM Rules of Conduct.

(2) Completion of this stage constitutes ACM qualified.

(3) An AV-8B ACTI, USMC FA-18 ACTI, or VFMT-401 ATI shall instruct all initial training events. Adversaries may be similar or dissimilar provided instructor requirements are met.

c. Ground/Academic Training

(1) Readings

(a) Air NTTP 3-22.1-AV8B

1. Review Chapter 15, Air-to-Air Fundamentals
2. Review Chapter 16, Air-to-Air Planning Considerations
3. Review Chapter 17, Air-to-Air Employment Contracts
4. Review Chapter 18, Air-to-Air Tactics

(b) AV-8B TACSOP

1. Review Basic Fighter Maneuvering
2. Review Air Combat Maneuvering

(c) NAVMC DIR 3500.14, Aviation Training and Readiness Program Manual. Review Chapter 4, ACM Rules of Conduct

(d) TOPGUN Manual

1. Review Chapter 9, Rule-of-Thumb

2. Review Chapter 11, Threat Aircraft
3. Review Chapter 12, Threat RADAR Missiles
4. Review Chapter 13, Threat IR Missiles
5. Review Chapter 21, Combat Gunnery
6. Review Chapter 39, Intercept Control

(2) Lectures

(a) Review the following AV-8B Courseware lectures:

1. ACM Safety and A/A Systems
2. Aircraft Performance
3. Combat Gunnery
4. Combat Thrust Vector Control

(b) Receive the following AV-8B Courseware lectures:

1. 1v1 Basic Fighter Maneuvers
2. 2v1 Basic Fighter Maneuvers
3. Air Intercept Control
4. Combat Section Tactics

(3) Chalk Talks/Practical Application

(a) NSAWC AIM-9M-8 Interactive CD ROM

(b) Air-to-Air timelines

(4) Exams. None.

d. Flight and Simulator Event Training. (15 Events, 17.4 Hours).

SAA-260

1.0

R RNWST S

Goal. Review TVC procedures, break turns and air-to-air weapon set-up, HOTAS, ACM modes, and employment.

Requirement. Complete 1 high speed departure recovery, 1 slow speed departure recovery, 2 heat-to-guns drills, 2 turn rate drills, 2 break turns with a deck transition, 1 TVC assisted turn drill, 1 HSPO, 1 HSWO, and 1 Flop. Instruction shall include HOTAS specifics and scan techniques.

Performance Standards

Adhere to ACM training rules.

Departure recovery procedures IAW AV-8B NATOPS.

Execute drills and procedures IAW Air NTTP 3-22.1-AV8B and AV-8B TACSOP.
Recognize AIM-9M-8 and GAU-12 WEZ.
100% valid shots.
Correct ALSA Communication Brevity.

Prerequisite. Complete Ground/Academic Training, AS-244.

Ordinance. 2 AIM-9M-8 and SEL 5.

AA-261

1.3 2 AV-8B A

Goal. Review TVC procedures, break turns and air-to-air weapon set-up, HOTAS, ACM modes, and employment.

Requirement. Complete 1 zero airspeed departure recovery, 2 heat-to-guns drills, 2 turn rate drills, 2 break turns with a deck transition, 1 TVC assisted turn drill, 1 HSPO, 1 HSWO, and 1 Flop. Instruction shall include ACM training rules application, HOTAS specifics and scan techniques.

Performance Standards

Adhere to ACM training rules.
Departure recovery procedures IAW AV-8B NATOPS.
Execute drills and procedures IAW Air NTTP 3-22.1-AV8B and AV-8B TACSOP.
Recognize AIM-9M-8 and GAU-12 WEZ.
100% valid shots.
Correct ALSA Communication Brevity.

Prerequisite. SAA-260.

Ordinance. CATM-9M-8, TACTS, expendables.

Range Requirements. AA, TACTS, EXP.

AA-262

1.3 2 AV-8B A

Goal. Review 1 V 1 offensive BFM.

Requirement. Review 1 heat-to-guns drill, 1 snapshot drill, 1 9,000-foot, 1 6,000-foot and 1 3,000-foot offensive perch engagements. Instruction shall include ACM training rules application, energy management and assessment, turn circle recognition, WEZ recognition, and deck awareness.

Performance Standards

Adhere to ACM training rules.
Execute drills and procedures IAW Air NTTP 3-22.1-AV8B and AV-8B TACSOP.
Maintain offensive position or disengage prior to a defensive position.
Recognize AIM-9M-8 and GAU-12 WEZ.
100% valid shots.
Correct ALSA Communication Brevity.

Prerequisite. AA-261.

Ordnance. CATM-9M-8, TACTS pod, expendables.

Range Requirements. AA.

AA-263

1.3 2 AV-8B A

Goal. Review 1 V 1 defensive BFM.

Requirement. Review 1 rolling scissors drill, 1 horizontal scissors drill, 1 9,000-foot, 1 6,000-foot, and 1 3,000-foot defensive perch engagements. Instruction shall include ACM training rules application, energy management and assessment, deck awareness, and air-to-air threat countertactics within visual range.

Performance Standards

Adhere to ACM training rules.
Execute drills and procedures IAW Air NTTP 3-22.1-AV8B and AV-8B TACSOP.
Recognize adversary WEZ and execute appropriate countertactic.
100% valid shots.
Correct ALSA Communication Brevity.

Prerequisite. AA-262.

Ordnance. CATM-9M-8, TACTS, expendables.

Range Requirements. AA, TACTS, EXP.

AA-264

1.3 R 2 AV-8B A

Goal. Review 1 V 1 high aspect BFM against a Category II and Category IV adversary.

Requirement. Review 1 snapshot drill, 1 heat-to-guns drill and 3 neutral engagements against a similar or dissimilar adversary: 1 butterfly or abeam set-up and 2 FQMD set-ups. Adversary gameplan will be stipulated in the brief. Instruction shall include ACM training rules application, energy management and assessment, gameplans, pre-merge considerations, weapons employment, deck awareness, and air-to-air threat countertactics within visual range.

Performance Standards

Adhere to ACM training rules.
Execute gameplan IAW Air NTTP 3-22.1-AV8B.
Recognize adversary WEZ and execute appropriate countertactic.
Execute FQMD to defeat SAR-1 missile and follow-on IR-3 missile.
100% valid shots.
Correct ALSA Communication Brevity.

Prerequisite. BFM-263.

Ordnance. CATM-9M-8, TACTS, expendables.

Range Requirements. AA, TACTS, EXP.

SAA-265

1.0 RNWST S (NS)

Goal. Review AWI, GCI/AIC integration, AIM-9M-8 employment against a single, unaware, Category II adversary.

Requirement. Review 2 forward quarter and 2 rear quarter AWI against a non-maneuvering Category II adversary on a strike profile. Review GCI/AIC integration. Review 4 AIM-9M-8 engagements. Review ALQ-164 set-up and employment.

Performance Standards

Execute AWI procedures IAW Air NTTP 3-22.1-AV8B
Adhere to RADAR timeline, contracts and criteria.
100% valid shots.
Correct ALSA Communication Brevity.

Prerequisite. Complete Ground/Academic training, AS-244.

Ordnance. 4 AIM-9M-8, ALQ-164, and SEL 5.

SAA-266

1.0 MTT/RNWST S (NS)

Goal. Introduce single group presentations and high-fast flyer. Review AWI, GCI/AIC integration, and AIM-9M-8 employment.

Requirement. Perform 4 forward quarter AWI against a single group, unaware, Category II adversary on a strike profile. Adversary shall be at 35,000-feet for one engagement. Instruction shall include evaluating target Mach, altitude, closure, and aspect cues. Adversary group formations shall include azimuth, range, and echelon presentations. Review 4 AIM-9M-8 engagements. Review ALQ-164 set-up and employment.

Performance Standards

Execute AWI procedures IAW Air NTTP 3-22.1-AV8B
Adhere to air-to-air timeline, contracts and criteria.
Accurate adversary formation analysis and sort IAW brief.
100% valid shots.
Correct ALSA Communication Brevity.

Prerequisite. SAA-265.

Ordnance. 4 AIM-9M-8, ALQ-164, and SEL 5.

SAA-267

1.0 RNWST S (NS)

Goal. Introduce CAP procedures and VID tactics. Review AWI, GCI/AIC integration, AIM-9M-8 employment against a single group, unaware adversary.

Requirement. Perform 4 forward quarter AWI intercepts against a single group, unaware adversary requiring PHID via VID. Adversaries will include friendly and threat aircraft. Adversary shall be at 35,000-feet for one engagement. Instruction shall include evaluating target Mach, altitude, closure, and aspect cues. Adversary group formations shall

include azimuth, range, and echelon presentations.
Adversaries shall be maneuvering. Review AIM-9M-8 employment and air-to-air threat countertactics, ALQ-164 set-up and employment.

Performance Standards

Execute AWI procedures IAW Air NTP 3-22.1-AV8B.
Adhere to air-to-air timeline, contracts and criteria.
Execute briefed air-to-air threat countertactics gameplan.
Accurate adversary formation analysis and sort IAW brief.
100% valid shots.
Correct ALSA Communication Brevity.

Prerequisite. SAA-266.

Ordnance. 4 AIM-9M-8-8, ALQ-164, and SEL 5.

SAA-268

1.0 MTT/RNWST S (NS)

Goal. Introduce short range RADAR mechanics. Review CAP procedures, AWI, GCI/AIC integration, AIM-9M-8 employment against a single group, aware, Category II adversary.

Requirement. Perform 3 forward quarter intercepts from a CAP against a pop-up single group, aware, IR-2 capable Category II adversary within 20nm. Perform 1 rear quarter engagement against a pop-up single group, aware, SAR-1 capable Category II adversary within 10nm. Instruction shall include low SA RADAR set mechanics, ACM modes, and recommit criteria. Review GCI/AIC integration. Review AIM-9M-8 employment and air-to-air threat countertactics.

Performance Standards

Execute AWI procedures IAW Air NTP 3-22.1-AV8B.
Adhere to air-to-air timeline, contracts and criteria.
Execute briefed air-to-air threat countertactics gameplan.
Accurate adversary formation analysis and sort IAW brief.
100% valid shots.
Correct ALSA Communication Brevity.

Prerequisite. SAA-267.

Ordnance. 4 AIM-9M-8, ALQ-164, and SEL 5.

SAA-269

1.0 MTT/RNWST S (NS)

Goal. Introduce section intercepts against a single group, unaware, SAR-1 capable, Category IV adversary.

Requirement. Perform 4 engagements against a single sortable group, unaware, SAR-1 capable, Category IV adversary requiring PHID. Adversary group formations shall include azimuth, range, and echelon presentations; and shall ingress from 1,000 to 40,000 feet. Instruction shall include air-to-air timeline, contracts, criteria and air-to-air threat countertactics beyond visual range. Review AIM-9M-8 employment and FQMD.

Performance Standards

Execute intercept procedures IAW Air NTTP 3-22.1-AV8B.
Adhere to air-to-air timeline, contracts and criteria.
Execute briefed air-to-air threat countertactics gameplan.
Accurate adversary formation analysis and sort IAW brief.
100% valid shots.
Correct ALSA Communication Brevity.

Prerequisite. SAA-268.

Ordinance. 4 AIM-9M-8, ALQ-164, and SEL 5.

SAA-270

1.0 MTT/RNWST S (NS)

Goal. Introduce section intercepts against a single group, aware, SAR-1 capable, Category IV adversary.

Requirement. Perform 4 intercept against a single sortable group, aware, SAR-1 capable, Category IV adversary requiring PHID. Adversary group formations shall include azimuth, range, and echelon presentations; and shall ingress from 1,000 to 40,000 feet. Instruction shall include air-to-air timeline, contracts, criteria, RWR awareness and air-to-air threat countertactics beyond visual range. Review AIM-9M-8 employment and FQMD.

Performance Standards

Execute intercept procedures IAW Air NTTP 3-22.1-AV8B.
Adhere to air-to-air timeline, contracts and criteria.
Execute briefed air-to-air threat countertactics gameplan.
Accurate adversary formation analysis and sort IAW brief.
100% valid shots.
Correct ALSA Communication Brevity.

Prerequisite. SAA-269.

Ordinance. 4 AIM-9M-8, ALQ-164, and SEL 5.

AA-271

1.3 R 2 AV-8B A

Goal. Introduce 2 V 1 Section Engaged Maneuvering.

Requirement. Perform 4 engagement: 2 forward quarter engagements (1 forward quarter and 1 abeam set-up) and 2 rear quarter engagements (1 inside IR-2 WEZ and 1 outside SAR-1 WEZ). Instruction shall include engaged and supporting fighter contracts, disengagement procedures, ACM training rules application, applicable ALSA communications, and air-to-air threat countertactics within visual range.

Performance Standards

Adhere to ACM training rules.
Executes briefed contracts and gameplans.
Execute briefed air-to-air threat countertactics gameplan.
100% valid shots.
Time-to-kill less than 90 seconds.
Correct ALSA Communication Brevity.

Prerequisite. AA-264, AA-270.

Ordnance. CATM-9M-8, TACTS pod, expendables.

Range Requirements. AA, EXP, TACTS.

External Syllabus Support. 1 adversary (dissimilar preferred).

AA-272

1.3 2 AV-8B A

Goal. Introduce 2 V 2 Section Engaged Maneuvering.

Requirement. From a tap-the-cap setup, perform 3 visual engagements against IR-2 capable Category II adversary: 1 forward quarter entry, 1 beam entry, and 1 rear quarter entry. PHID via VID is required for fighters and adversaries. Instruction shall include pre-merge and post-merge gameplans, engaged and supporting fighter contracts, ACM training rules application, applicable ALSA communications, and air-to-air threat countertactics within visual range.

Performance Standards

Adhere to ACM training rules.
Executes briefed contracts and gameplans.
Execute briefed air-to-air threat countertactics gameplan.
100% valid shots.
Correct ALSA Communication Brevity.

Prerequisite. AA-271.

Ordnance. CATM-9M-8, TACTS pod, and expendables.

Range Requirements. AA, EXP, TACTS.

External Syllabus Support. TACTS, 2 dissimilar adversaries.

AA-273

1.3 2 AV-8B A

Goal. Review 1 V 1 intercepts, GCI/AIC integration, and AIM-9M-8 employment against a single, Level 2, IR-2 capable Category II adversary.

Requirement. Perform 4 AWI intercepts against a single, Level 2, IR-2 capable Category II adversary simulating a strike profile. Adversary maneuvering is limited to no more than flanking aspect or 10,000 feet of altitude change with picture set at 15nm. Instruction shall include air-to-air timeline, intercept geometry, GCI/AIC integration, and ACM training rules application. Initial training shall be in a AV-8B II+.

Performance Standards

Execute AWI procedures IAW Air NTP 3-22.1-AV8B
Adhere to air-to-air timeline, contracts and criteria.
100% valid shots.
Correct ALSA Communication Brevity.

Prerequisite. AA-272.

Ordnance. CATM-9M-8, ALQ-164, TACTS pod, and expendables.

Range Requirements. AA, EXP, TACTS.

External Syllabus Support. AIC/GCI, TACTS debrief facility.

AA-274

1.3 R 2 AV-8B A

Goal. Introduce section intercepts against a single sortable group, Level 1, SAR-1 capable, Category IV adversary.

Requirement. Perform 3 intercepts against a single sortable group, Level 1, SAR-1 capable, Category IV adversary requiring PHID. Adversary group formations shall include azimuth, range, and echelon presentations; and shall ingress from 1,000 to 40,000 feet. Instruction shall include air-to-air timeline, contracts, and criteria; RWR awareness and air-to-air threat countertactics beyond visual range. Review AIM-9M-8 employment, FQMD, and air-to-air threat countertactics within visual range. Initial training shall be in a AV-8B II+.

Performance Standards

Execute intercept procedures IAW Air NTTP 3-22.1-AV8B.
Adhere to air-to-air timeline, contracts and criteria.
Execute briefed air-to-air threat countertactics gameplan.
Accurate adversary formation analysis and sort IAW brief.
100% valid shots.
Correct ALSA Communication Brevity.

Prerequisite. AA-273.

Ordnance. CATM-9M-8, ALQ-164, TACTS pod, and expendables.

Range Requirements. AA, EXP, TACTS.

External Syllabus Support. TACTS range, 2 SAR-1 capable adversaries (dissimilar preferred), and GCI.

134. CORE SKILL ADVANCED TRAINING

1. Core Skill Advanced Training

- a. Purpose. Develop proficiency in OAS and AAW missions.
- b. General. Initial POI events shall be tailored to a wingman's role.

2. Close Air Support (CAS)

- a. Purpose. Develop proficiency in CAS execution during day and night missions at medium altitude in a low to medium threat environment.
- b. General. A Section Leader shall instruct all events.

c. Ground/Academic Training

(1) Readings

(a) Review Joint Publication 3-09.3, Joint Tactics, Techniques, and Procedures for Close Air Support

(b) AV-8B NATIP (NTRP 3-22.4). Review Section 2.10.3 The CAS Display

(c) Air NTTP 3-22.1-AV8B

1. Review Chapter 9, Close Air Support

2. Chapter 10, Urban Offensive Air Support Considerations

(d) AV-8B TACSOP. Review Close Air Support

(2) Lectures

(a) Receive the following AV-8B Courseware lecture: Automatic Target Handoff System (ATHS)/Digital CAS

(b) Review the following AV-8B Courseware lecture: CAS Execution

(3) Chalk Talks/Practical Application. None.

(4) Exams. None.

d. Flight and Simulator Event Training. (8 Events, 9.5 Hours).

SCAS-300 1.0 R WST/NWST/RNWST S (NS)

Goal. Review CAS execution under Type 1 terminal attack control.

Requirement. Execute 4 attacks under Type 1 terminal attack control. Emphasize systems management, target PID, target area tactics, reactive weaponeering, threat countertactics and standardized communications.

Performance Standards

Execute IAW with JPub 3-09.3.

Execute IAW Air NTTP 3-22.1-AV8B.

Execute briefed air-to-surface timeline.

Execute briefed surface-to-air threat countertactics.

Valid weapon release IAW Air NTTP 3-22.1-AV8B.

Comply with Tactical Abort Parameters.

Correct ALSA Communication Brevity.

TOT +/- 15 seconds.

Prerequisite. Complete Ground/Academic training, NS-255.

Ordnance. TPOD, 1 GBU-12, 2 Mk-82 LD w/DSU-33, 300 25mm SAPHEI-T, and SEL 1.

SCAS-301

1.0

WST/NWST/RNWST S (NS)

Goal. Review CAS execution under Type 2 and 3 terminal attack control.

Requirement. Execute 3 attacks under Type 2 terminal attack control and 1 attack under Type 3 terminal attack control. Emphasize systems management, target PID, target coordinate generation accuracy, PGM employment, threat countertactics, and standardized communications. Conduct a minimum of 1 attack with an active RF SAM threat.

Performance Standards

Execute IAW with JPub 3-09.3.
Execute IAW Air NTTP 3-22.1-AV8B.
Execute briefed air-to-surface timeline.
Execute briefed surface-to-air threat countertactics.
Valid weapon release IAW Air NTTP 3-22.1-AV8B.
Comply with Tactical Abort Parameters.
Correct ALSA Communication Brevity.
TOT +/- 15 seconds.

Prerequisite. SCAS-300.

Ordinance. TPOD, 1 GBU-12, 2 GBU-38, ALQ-164, and SEL 1.

SCAS-302

1.0

NWST/RNWST S (NS)

Goal. Introduce digital CAS.

Requirement. Conduct 3 CAS attacks using digital communications (ATHS) under Type 1, 2, or 3 terminal attack control. Emphasize systems management, target PID, target coordinate generation accuracy, PGM employment, threat countertactics, and standardized communications.

Performance Standards

Execute IAW with JPub 3-09.3.
Execute IAW Air NTTP 3-22.1-AV8B.
Execute briefed air-to-surface timeline.
Execute briefed surface-to-air threat countertactics.
Valid weapon release IAW Air NTTP 3-22.1-AV8B.
Comply with Tactical Abort Parameters.
Correct ALSA Communication Brevity.
TOT +/- 15 seconds.

Prerequisite. SCAS-301.

Ordinance. TPOD, 2 GBU-12, 1 AGM-65E, 300 25mm SAPHEI-T and SEL 1.

CAS-303

1.3

R 2 AV-8B A

Goal. Review day CAS execution under Type 1 terminal attack control.

Requirement. Conduct 2 attacks under Type 1 terminal attack control. Emphasize systems management, target PID, target area tactics, reactive weaponeering, threat countertactics and standardized communications.

Performance Standards

Execute IAW with JPub 3-09.3.
Execute IAW Air NTTP 3-22.1-AV8B.
Execute briefed air-to-surface timeline.
Execute briefed surface-to-air threat countertactics.
Valid weapon release IAW Air NTTP 3-22.1-AV8B.
Comply with Tactical Abort Parameters.
Weapon impacts within CEP.
Correct ALSA Communication Brevity.
TOT +/- 15 seconds.

Prerequisite. SCAS-302.

Ordnance. TPOD, free fall ordnance or PGM, and expendables.

Range Requirements. RSTD, JCAS, EXP, WISS.

External Syllabus Support. JTAC.

CAS-304

1.3 2 AV-8B A

Goal. Review day CAS execution under Type 2 and 3 terminal attack control.

Requirement. Conduct 1 attack under Type 2 terminal attack control and 1 attack under Type 3 terminal attack control. Emphasize systems management, target PID, target coordinate generation accuracy, PGM employment, threat countertactics and standardized communications.

Performance Standards

Execute IAW with JPub 3-09.3.
Execute IAW Air NTTP 3-22.1-AV8B.
Execute briefed air-to-surface timeline.
Execute briefed surface-to-air threat countertactics.
Valid weapon release IAW Air NTTP 3-22.1-AV8B.
Comply with Tactical Abort Parameters.
Weapon impacts within CEP.
Correct ALSA Communication Brevity.
TOT +/- 15 seconds.

Prerequisite. SCAS-302.

Ordnance. TPOD, PGMs and expendables.

Range Requirements. LSR, inert, HE, and JDAM.

External Syllabus Support. JTAC.

CAS-305

1.3 R 2 AV-8B A NS

Goal. Review night CAS execution under Type 1 terminal attack control.

Requirement. Conduct 2 attacks under Type 1 terminal attack control. Emphasize systems management, target PID, target area tactics, IR marker employment, reactive weaponeering, and standardized communications.

Performance Standards

Execute IAW with JPub 3-09.3.
Execute IAW Air NTTP 3-22.1-AV8B.
Execute briefed air-to-surface timeline.
Execute briefed surface-to-air threat countertactics.
Valid weapon release IAW Air NTTP 3-22.1-AV8B.
Comply with Tactical Abort Parameters.
Weapon impacts within CEP.
Correct ALSA Communication Brevity.
TOT +/- 15 seconds.

Prerequisite. CAS-303.

Ordnance. TPOD, Free fall ordnance or PGMs, and expendables.

Range Requirements. RSTD, JCAS, EXP, WISS.

External Syllabus Support. JTAC.

CAS-306

1.3 R 2 AV-8B A NS

Goal. Review night CAS execution under Type 2 and 3 terminal attack control.

Requirement. Conduct 1 attack under Type 2 terminal attack control and 1 attack under Type 3 terminal attack control. Emphasize systems management, target PID, target coordinate generation accuracy, PGM employment, IR marker employment and standardized communications.

Performance Standards

Execute IAW with JPub 3-09.3.
Execute IAW Air NTTP 3-22.1-AV8B.
Execute briefed air-to-surface timeline.
Execute briefed surface-to-air threat countertactics.
Valid weapon release IAW Air NTTP 3-22.1-AV8B.
Comply with Tactical Abort Parameters.
Weapon impacts within CEP.
Correct ALSA Communication Brevity.
TOT +/- 15 seconds.

Prerequisite. CAS-304.

Ordnance. TPOD, PGMs and expendables.

Range Requirements. RSTD, JCAS, EXP, WISS.

External Syllabus Support. JTAC.

CAS-307 1.3 2 AV-8B A (NS)

Goal. Introduce urban CAS execution.

Requirement. Conduct 2 CAS attacks in an urban environment. Emphasize systems management, target PID, target coordinate generation accuracy and weapons employment. This sortie can be completed using an actual urban area with simulated ordnance or a simulated urban complex using live or inert ordnance.

Performance Standards

Execute IAW with JPub 3-09.3.
Execute IAW Air NTTP 3-22.1-AV8B.
Execute briefed air-to-surface timeline.
Execute briefed surface-to-air threat countertactics.
Valid weapon release IAW Air NTTP 3-22.1-AV8B.
Comply with Tactical Abort Parameters.
Weapon impacts within CEP.
Correct ALSA Communication Brevity.
TOT +/- 15 seconds.

Prerequisite. SCAS-302.

Ordnance. TPOD, PGMs and expendables.

Range Requirements. URBN WPNS, WISS, JCAS.

External Syllabus Support. JTAC.

4. Armed Reconnaissance (AR)

a. Purpose. Develop proficiency in AR execution during day and night missions at medium altitude in a low to medium threat environment.

b. General. A Section Leader shall instruct all events.

c. Ground/Academic Training

(1) Readings

(a) Air NTTP 3-22.1-AV8B. Chapter 8, Sections 8.1 - 8.6, 8.8

(b) AV-8B TACSOP. Armed Reconnaissance

(2) Lectures. Receive the following AV-8B Courseware lectures:

(a) Armed Reconnaissance

(b) Armed Reconnaissance Procedures

(3) Chalk Talks/Practical Application. None.

(4) Exams. None.

d. Flight and Simulator Event Training. (4 Events, 4.9 Hours).

SAR-310

1.0

WST/NWST/RNWST S

Goal. Conduct day medium altitude AR.

Requirement. Brief a Reactive Attack Guidance Matrix (RAGM) and Rules of Engagement (ROE). Detect, recognize and PID targets according to ROE. Execute 2 attacks using free fall or forward firing ordnance and 1 attack with JDAM. Review direct, delayed, and transition attack profiles. Communicate MISREP to a simulated MACCS.

Performance Standards

Execute IAW Air NTTP 3-22.1-AV8B.
Execute briefed air-to-surface timeline and RAGM.
Execute briefed surface-to-air threat countertactics.
Valid weapon release IAW Air NTTP 3-22.1-AV8B.
Comply with Tactical Abort Parameters.
Communicate an accurate MISREP to the MACCS.
Correct ALSA Communication Brevity.

Prerequisite. Complete Ground/Academic training, NS-255.

Ordnance. TPOD, 1 GBU-32/38, 2 CBU-99/100 w/FMU-140, 300 25mm SAPHEI-T, and SEL 1.

AR-311

1.3

2+ AV-8B A (NS)

Goal. Conduct medium altitude AR with GP munitions.

Requirement. Brief a RAGM and ROE. Detect, recognize and PID targets according to ROE. Execute 2 attacks using free fall or forward firing ordnance. Communicate MISREP to a simulated or actual MACCS.

Performance Standards

Execute IAW Air NTTP 3-22.1-AV8B.
Execute briefed air-to-surface timeline and RAGM.
Execute briefed surface-to-air threat countertactics.
Valid weapon release IAW Air NTTP 3-22.1-AV8B.
Comply with Tactical Abort Parameters.
Weapon impacts within CEP.
Communicate an accurate MISREP to the MACCS.
Correct ALSA Communication Brevity.

Prerequisite. AR-310.

Ordnance. TPOD, Free fall ordnance and expendables.

Range Requirements. RSTD, LSR, COMPLEX, EXP.

AR-312

1.3

R 2+ AV-8B A

Goal. Conduct medium altitude AR with PGM.

Requirement. Brief a RAGM and ROE. Detect, recognize and PID targets according to ROE. Execute 2 attacks with PGM. Communicate MISREP to a simulated or actual MACCS.

Performance Standards

Execute IAW Air NTTP 3-22.1-AV8B.
Execute briefed air-to-surface timeline and RAGM.
Execute briefed surface-to-air threat countertactics.
Valid weapon release IAW Air NTTP 3-22.1-AV8B.
Comply with Tactical Abort Parameters.
Weapon impacts within CEP.
Communicate an accurate MISREP to the MACCS.
Correct ALSA Communication Brevity.

Prerequisite. AR-311.

Ordnance. TPOD, PGMs and expendables.

Range Requirements. RSTD, LGB, JDAM, COMPLEX, EXP.

AR-313

1.3 R 2+ AV-8B A NS

Goal. Conduct night medium altitude AR with PGMs.

Requirement. Brief a RAGM and ROE. Detect, recognize and PID targets according to ROE. Execute 2 attacks with PGM. Communicate MISREP to a simulated or actual MACCS.

Performance Standards

Execute IAW Air NTTP 3-22.1-AV8B.
Execute briefed air-to-surface timeline and RAGM.
Execute briefed surface-to-air threat countertactics.
Valid weapon release IAW Air NTTP 3-22.1-AV8B.
Comply with Tactical Abort Parameters.
Weapon impacts within CEP.
Communicate an accurate MISREP to the MACCS.
Correct ALSA Communication Brevity.

Prerequisite. AR-312.

Ordnance. TPOD, PGMs and expendables.

Range Requirements. RSTD, LGB, JDAM, COMPLEX, IR TGT, EXP.

5. Strike Coordination and Reconnaissance (SCAR)

a. Purpose. Develop proficiency in SCAR execution during day and night missions at medium altitude in a low to medium threat environment.

b. General. A Section Leader shall instruct all events.

c. Ground/Academic Training

(1) Readings

(a) Air NTTP 3-22.1-AV8B. Chapter 8, Section 8.9

(b) AV-8B TACSOP. Strike Coordination and Reconnaissance

(2) Lectures. Receive the following MAWTS-1 Common Courseware lecture: SCAR Tactics, Techniques and Procedures

(3) Chalk Talks/Practical Application. None.

(4) Exams. None.

d. Flight and Simulator Event Training. (2 Events, 2.6 Hours).

SCAR-320 1.3 2 AV-8B A

Goal. Conduct day SCAR.

Requirement. Brief a RAGM and ROE. Detect, recognize and PID targets according to ROE. Coordinate with a minimum of 1 external section to conduct a minimum of 2 target attacks. Provide a MISREP to the MACCS (actual or simulated). Perform a SCAR-to-SCAR handover (actual or simulated).

Performance Standards

Execute IAW Air NTTP 3-22.1-AV8B.
Execute briefed air-to-surface timeline and RAGM.
Execute briefed surface-to-air threat countertactics.
Accurate target coordinate generation, communication, and marking.
Valid weapon release IAW Air NTTP 3-22.1-AV8B.
Comply with Tactical Abort Parameters.
Weapon impacts within CEP.
Communicate an accurate MISREP/IFREP to strikers and MACCS.
Correct ALSA Communication Brevity.

Prerequisite. Complete Ground/Academic training, AR-313.

Ordinance. TPOD, PGMs or freefall ordnance, and expendables.

Range Requirements. RSTD, JDAM, LGB, EXP, COMPLEX.

External Syllabus Support. One section AR assets.

SCAR-321 1.3 R 2 AV-8B A NS

Goal. Conduct night SCAR.

Requirement. Brief a RAGM and ROE. Detect, recognize and PID targets according to ROE. Coordinate with a minimum of 1 external element to conduct a minimum of 2 target attacks. Provide a MISREP to the MACCS (actual or simulated). Perform a SCAR-to-SCAR handover (actual or simulated).

Performance Standards

Execute IAW Air NTTP 3-22.1-AV8B.
Execute briefed air-to-surface timeline and RAGM.
Execute briefed surface-to-air threat countertactics.
Accurate target coordinate generation, communication, and marking.
Valid weapon release IAW Air NTTP 3-22.1-AV8B.

Comply with Tactical Abort Parameters.
Weapon impacts within CEP.
Communicate an accurate MISREP/IFREP to strikers and MACCS.
Correct ALSA Communication Brevity.

Prerequisite. SCAR-320.

Ordnance. TPOD, PGMs or freefall ordnance, and expendables.

Range Requirements. RSTD, JDAM, LGB, EXP, COMPLEX.

External Syllabus Support. One section AR assets.

6. Anti-Air Warfare (AAW)

a. Purpose. Develop proficiency in AAW execution during day and night missions in a medium threat environment.

b. General. A Section Leader shall instruct all events.

c. Ground/Academic Training

(1) Readings

(a) Air NTTP 3-22.1-AV8B. Chapter 19, Defensive Counter-Air Planning and Employment

(b) AV-8B TACSOP. Anti-Air Warfare

(2) Lectures. None.

(3) Chalk Talks/Practical Application. None.

(4) Exams. None.

d. Flight and Simulator Event Training. (3 Events, 3.3 Hours).

SAAW-330 1.0 R RNWST S (NS)

Goal. Introduce two group presentations.

Requirement. From a CAP, perform 4 intercepts against two groups presentations of non-maneuvering, SAR-1 capable, Category IV adversary. Adversary presentations shall include azimuth and range presentations at different altitudes. Adversary groups shall be in section.

Performance Standards

Execute DCA procedures IAW Air NTTP 3-22.1-AV8B.
Adhere to air-to-air timeline, contracts, and criteria.
Execute briefed air-to-air threat countertactics gameplan.
Accurate adversary formation analysis and sort IAW brief.
100% valid shots.
Correct ALSA Communication Brevity.

Prerequisite. Complete Ground/Academic Training, AA-274, (NS-255 if aided).

Ordnance. 4 AIM-9M-8, ALQ-164, and SEL-5.

SAAW-331

1.0 RNWST S (NS)

Goal. Decoy Tactics.

Requirement. From a CAP, perform 4 intercepts against two groups presentations of maneuvering, SAR-1 capable, Category IV adversary. Adversary presentations shall include azimuth and range presentations at different altitudes. Adversary groups shall be in section. Adversary maneuvers shall simulate Level 3 decoy tactics.

Performance Standards

Execute DCA procedures IAW Air NTTP 3-22.1-AV8B.
Adhere to air-to-air timeline, contracts, and criteria.
Execute briefed air-to-air threat countertactics gameplan.
Accurate adversary formation analysis and sort IAW brief.
100% valid shots.
Correct ALSA Communication Brevity.

Prerequisite. SAA-330, (NS-255 if aided).

Ordnance. 4 AIM-9M-8, ALQ-164, and SEL-5.

AAW-332

1.3 R 2+ AV-8BII+ A (NS)

Goal. 2vX DCA (Point defense).

Requirement. Perform a point defense. Emphasize ROE, ALSA communications, threat countertactics, and mutual support. Complete 3 engagements: 1 aware IR-2 capable striker, 1 unaware SAR-1 capable striker, 1 aware SAR-1 capable OCA fighter.

Performance Standards

Adhere to ACM training rules.
Delay, deny, destroy threat aircraft IAW ROE for a 30-minute VUL.
Adhere to air-to-air timeline, contracts, and criteria.
Execute briefed air-to-air threat countertactics gameplan.
Accurate adversary formation analysis and sort IAW brief.
100% valid shots.
Correct ALSA Communication Brevity.

Prerequisite. SAAW-331, (NS-255 if aided).

Range Requirements. AA, TACTS, EXP.

Ordnance. CATM-9M-8, TACTS, and expendables.

External Syllabus Support. TACTS range, RADAR equipped adversary and GCI/AIC.

7. Air Interdiction (AI)

a. Purpose. Develop proficiency in AI execution during day and night missions at medium altitude in a medium surface-to-air and air-to-air threat environment.

b. General. A Section Leader shall instruct all events.

c. Ground/Academic Training

(1) Readings

(a) Air NTTP-3-22.1-AV8B

1. Chapter 8, Section 8.7, Air Interdiction

2. Chapter 11, Suppression of Enemy Air Defenses

(b) AV-8B TACSOP. Air Interdiction

(2) Lectures. Receive the following AV-8B Courseware lecture: AI Planning and Execution.

(3) Chalk Talks/Practical Application. None.

(4) Exams. None.

d. Flight and Simulator Event Training. (4 Events, 4.9 Hours).

SAI-350 1.0 NWST/RNWST S (NS)

Goal. Introduce medium altitude AI.

Requirement. Perform a medium altitude AI with a surface-to-air and air-to-air threat.

Performance Standards

Execute IAW Air NTTP 3-22.1-AV8B.

Execute briefed air-to-surface timeline.

Execute briefed surface-to-air threat countertactics.

Weapon impact within +/- 15 seconds of TOT.

Valid weapon release IAW Air NTTP 3-22.1-AV8B.

Comply with Tactical Abort Parameters.

Weapon impacts within CEP.

Communicate an accurate MISREP to the MACCS.

Correct ALSA Communication Brevity.

Prerequisite. Complete Ground/Academic training, 200-level complete.

Ordnance. 2 300-gallon fuel tanks, 2 GBU-32, 2 AIM-9M-8, ALQ-164, SEL 2.

AI-351 1.3 R 2+ AV-8B A

Goal. Introduce day medium altitude AI.

Requirement. Conduct a medium altitude AI as a section or division with a surface-to-air threat.

Performance Standards

Execute IAW Air NTTP 3-22.1-AV8B.
Execute briefed air-to-surface timeline.
Execute briefed surface-to-air threat countertactics.
Weapon impact within +/- 15 seconds of TOT.
Valid weapon release IAW Air NTTP 3-22.1-AV8B.
Comply with Tactical Abort Parameters.
Weapon impacts within CEP.
Communicate an accurate MISREP to the MACCS.
Correct ALSA Communication Brevity.

Prerequisite. SAI-350.

Ordnance. ALQ-164, 2 GBU-32/38, and expendables.

Range Requirements. RSTD, EW, WISS, JDAM, EXP, COMPLEX.

AI-352

1.3 2+ AV-8B A NS

Goal. Introduce night medium altitude AI.

Requirement. Conduct a medium altitude AI in a section or division with a surface-to-air threat.

Performance Standards

Execute IAW Air NTTP 3-22.1-AV8B.
Execute briefed air-to-surface timeline.
Execute briefed surface-to-air threat countertactics.
Weapon impact within +/- 15 seconds of TOT.
Valid weapon release IAW Air NTTP 3-22.1-AV8B.
Comply with Tactical Abort Parameters.
Weapon impacts within CEP.
Communicate an accurate MISREP to the MACCS.
Correct ALSA Communication Brevity.

Prerequisite. SAI-350.

Ordnance. ALQ-164, 2 GBU-32/38, and expendables.

Range Requirements. RSTD, EW, WISS, JDAM, EXP, COMPLEX.

AI-353

1.3 R 4 AV-8B A (NS)

Goal. Introduce medium altitude AI with an air-to-air threat.

Requirement. Conduct a medium altitude AI in a division with a surface-to-air and air-to-air threat.

Performance Standards

Adhere to ACM training rules.
Execute IAW Air NTTP 3-22.1-AV8B.
Execute briefed air-to-surface timeline.
Execute briefed surface-to-air threat countertactics.
Weapon impact within +/- 15 seconds of TOT.
Valid weapon release IAW Air NTTP 3-22.1-AV8B.
Comply with Tactical Abort Parameters.
Weapon impacts within CEP.
Communicate an accurate MISREP to the MACCS.

Correct ALSA Communication Brevity.

Prerequisite. SAI-352.

Ordnance. ALQ-164, 2 GBU-32/38, 2 CAIM-9M-8, and expendables.

Range Requirements. RSTD, EW, WISS, JDAM, EXP, COMPLEX.

External Syllabus Support. AIC/GCI, RADAR equipped adversary.

135. CORE PLUS PHASE

1. Core Plus Training

a. Purpose. Train for large scale integrated missions having unique mission tasking and introduce skills or missions having a lower probability of execution.

b. General. Instructor supervision requirements are stipulated specifically for each stage.

2. Day Field Carrier Landing Practice

a. Purpose. Review FCLP(D) qualification.

b. General

(1) A LSO shall instruct all events IAW V/STOL LSO NATOPS.

(2) All events shall be conducted at a simulated L-class ship equipped with an optical landing system.

(3) Prerequisites shall be IAW V/STOL LSO NATOPS.

(4) Completion of this stage constitutes FCLP(D) qualification.

c. Ground/Academic Training

(1) Readings

(a) Review VSTOL Shipboard and LSO NATOPS Manual (NAVAIR 00-80T-111)

(b) Review LHA/LHD/MCS NATOPS Manual (NAVAIR 00-80T-106)

(2) Lectures. Receive the following AV-8B Courseware lectures:

(a) V/STOL LSO NATOPS, Part 1

(b) V/STOL LSO NATOPS, Part 2

(c) LHA/LHD/MCS NATOPS

(3) Chalk Talks/Practical Application. None.

(4) Exams. None.

d. Flight and Simulator Event Training. (2 Events, 3.0 Hours).

SFCLP-400 1.0 R NWST/RNWT S

Goal. Review day FCLP.

Requirement. Review day FCLP normal and emergency procedures to a simulated L-class ship. Review Case 1 recoveries. Perform a minimum of 6 VL and 5 STO.

Performance Standards

Execute all procedures IAW AV-8B NATOPS, V/STOL LSO NATOPS, Shipboard Operating Bulletin and LHA/LHD NATOPS.

Prerequisite. Complete Ground/Academic Training, FAM-202.

FCLP-401 2.0 R 1 AV-8B A

Goal. Review day FCLP.

Requirement. Review day FCLP normal and emergency procedures to a simulated L-class ship. Review Case 1 recoveries.

Performance Standards

Execute all procedures IAW AV-8B NATOPS, V/STOL LSO NATOPS, Shipboard Operating Bulletin and LHA/LHD NATOPS.

Prerequisite. SFCLP-400.

External Syllabus Support. FCLP Facility.

3. Night Field Carrier Landing Practice

a. Purpose. Complete FCLP(N) qualification.

b. General

(1) A LSO shall instruct all events IAW V/STOL LSO NATOPS.

(2) All events shall be conducted at a simulated L-class ship equipped with an optical landing system.

(3) Prerequisites shall be IAW V/STOL LSO NATOPS.

(4) For initial qualifications, 2 CCA approaches shall be completed during daylight conditions prior to commencing night training.

(5) Completion of this stage constitutes FCLP(N) qualification.

c. Ground/Academic Training

(1) Readings. None.

(2) Lectures. Receive the following AV-8B Courseware lectures:

(a) Night Carrier Qualification, Unaided

- (b) Night Carrier Qualification, Aided
- (3) Chalk Talks/Practical Application. None.
- (4) Exams. None.

d. Flight and Simulator Event Training. (4 Events, 6.0 Hours).

SFCLP-402 1.0 R NWST/RNWST S N

Goal. Introduce FCLP at night (unaided).

Requirement. Perform night (unaided) FCLP normal and emergency procedures to a simulated L-class ship. Perform Case 2 and Case 3 recoveries. Perform CCA and AWLS approaches. Perform a minimum of 6 VL and 5 STO.

Performance Standards

Execute all procedures IAW AV-8B NATOPS, V/STOL LSO NATOPS, Shipboard Operating Bulletin and LHA/LHD NATOPS.

Prerequisite. Complete Ground/Academic Training, SFCLP-400.

FCLP-403 2.0 R 1 AV-8B A N

Goal. Introduce FCLP at night (unaided).

Requirement. Perform night (unaided) FCLP normal and emergency procedures to a simulated L-class ship. Perform Case 2 and Case 3 recoveries.

Performance Standards

Execute all procedures IAW AV-8B NATOPS, V/STOL LSO NATOPS, Shipboard Operating Bulletin and LHA/LHD NATOPS.

Prerequisite. FCLP 401, FCLP-402.

External Syllabus Support. FCLP Facility.

SFCLP-404 1.0 R NWST/RNWST S NS

Goal. Introduce FCLP at night (aided).

Requirement. Perform night (aided) FCLP normal and emergency procedures to a simulated L-class ship. Perform Case 1 recoveries. Perform a minimum of 6 VL and 5 STO.

Performance Standards

Execute all procedures IAW AV-8B NATOPS, V/STOL LSO NATOPS, Shipboard Operating Bulletin and LHA/LHD NATOPS.

Prerequisite. SFCLP-402, NS-255.

FCLP-405 2.0 R 1 AV-8B A NS

Goal. Introduce FCLP at night (aided).

Requirement. Perform night (aided) FCLP normal and emergency procedures to a simulated L-class ship. Perform Case 1 recoveries. Perform a minimum of 6 VL and 5 STO.

Performance Standards

Execute all procedures IAW AV-8B NATOPS, V/STOL LSO NATOPS, Shipboard Operating Bulletin and LHA/LHD NATOPS.

Prerequisite. SFCLP-401, SFCLP-404.

External Syllabus Support. NVD compatible FCLP Facility.

4. Day Carrier Qualification (CQ)

a. Purpose. Complete CQ(D) qualification.

b. General

(1) A LSO shall instruct all events IAW V/STOL LSO NATOPS.

(2) Prerequisites and total landing requirements shall be IAW V/STOL LSO NATOPS.

(3) Completion of this stage constitutes CQ(D) qualification.

c. Ground/Academic Training. Review FCLP stage Ground/Academic training.

d. Flight and Simulator Event Training. (2 Events, 4 hours).

SCQ-410 1.0 R NWST/RNWST S

Goal. Perform day CQ.

Requirement. Perform day CQ normal and emergency procedures to a simulated L-class ship. Introduce Case 1 recoveries. Perform a minimum of 6 VL and 5 STO.

Performance Standards

Execute all procedures IAW AV-8B NATOPS, V/STOL LSO NATOPS, Shipboard Operating Bulletin and LHA/LHD NATOPS.

Prerequisite. Complete Ground/Academic training, FCLP-401.

External Syllabus Support. FCLP Facility.

CQ-411 3.0 R 1 AV-8B A

Goal. Complete day CQ qualification.

Requirement. Perform day CQ normal and emergency procedures to an L-class ship. Perform Case 1, 2, and 3 recoveries (time and fuel permitting) including TACAN Primary and Overhead, CCA and needles approaches.

Performance Standards
Execute all procedures IAW AV-8B NATOPS, V/STOL LSO NATOPS,
Shipboard Operating Bulletin and LHA/LHD NATOPS.

Prerequisite. FCLP-410.

External Syllabus Support. L-class ship.

5. Night Carrier Qualification

a. Purpose. Complete CQ(N) qualification.

b. General

(1) A LSO shall instruct all events IAW V/STOL LSO NATOPS.

(2) Prerequisites and total landing requirements shall be IAW V/STOL LSO NATOPS.

(3) Completion of this stage constitutes CQ(N) qualification.

c. Ground/Academic Training. Review FCLP stage Ground/Academic training.

d. Flight and Simulator Event Training. (4 Events, 7.0 Hours).

SCQ-412 1.0 R NWST/RNWST S N

Goal. Perform CQ at night (unaided).

Requirement. Perform night (unaided) CQ normal and emergency procedures to a simulated L-class ship. Perform Case 2 and Case 3 recoveries. Perform CCA and AWLS approaches. Perform a minimum of 6 VL and 5 STO.

Performance Standards
Execute all procedures IAW AV-8B NATOPS, V/STOL LSO NATOPS,
Shipboard Operating Bulletin and LHA/LHD NATOPS.

Prerequisite. CQ-411.

External Syllabus Support. FCLP Facility.

CQ-413 2.0 R 1 AV-8B A N

Goal. Perform CQ at night (unaided).

Requirement. Perform night (unaided) CQ normal and emergency procedures to an L-class ship. Perform Case 2, and 3 recoveries (time and fuel permitting) including TACAN Primary and Overhead, CCA and needles approaches.

Performance Standards
Execute all procedures IAW AV-8B NATOPS, V/STOL LSO NATOPS,
Shipboard Operating Bulletin and LHA/LHD NATOPS.

Prerequisite. SCQ-412.

External Syllabus Support. L-class ship.

SCQ-414 1.0 R NWST/RNWST S NS

Goal. Perform CQ at night (aided).

Requirement. Perform night (aided) CQ normal and emergency procedures to a simulated L-class ship. Perform Case 1 recoveries. Perform a minimum of 6 VL and 5 STO.

Performance Standards

Execute all procedures IAW AV-8B NATOPS, V/STOL LSO NATOPS, Shipboard Operating Bulletin and LHA/LHD NATOPS.

Prerequisite. SCQ-411, NS-255.

CQ-415 3.0 R 1 AV-8B A NS

Goal. Perform CQ at night (aided).

Requirement. Perform night (aided) CQ normal and emergency procedures to an L-class ship. Perform Case 1.

Performance Standards

Execute all procedures IAW AV-8B NATOPS, V/STOL LSO NATOPS, Shipboard Operating Bulletin and LHA/LHD NATOPS.

Prerequisite. SCQ-414.

External Syllabus Support. Ship.

6. Forward Base Operations (FBO)

a. Purpose. Complete FBO qualifications.

b. General. The applicable LSS shall instruct all events.

c. Ground/Academic Training

(1) Readings. Review NAVAIR 00-80-T-11S, Expeditionary Airfields FOB NATOPS Manual

(2) Lectures. Review the following AV-8B Courseware lecture:
Forward Base Operations

(3) Chalk Talks/Practical Application. None.

(4) Exams. None.

d. Flight and Simulator Event Training. (4 Events, 6.0 Hours).

SFBO-420 1.0 R RNWST/NWST S

Goal. Practice day FBO.

Requirement. Perform V/STOL to an air facility. Instruction shall include FOD avoidance procedures, emergencies including

RPM rollback on STO, abort and ejection decisions, water failure during approach, and flap failure STO. A minimum of 6 takeoffs and landings is required for completion.

Performance Standards
Execute all procedures IAW AV-8B NATOPS.
Achieve an average pass grade of 2.5.

Prerequisite. Complete Ground/Academic training, FAM-202.

FBO-421 2.0 R 1 AV-8B A

Goal. Practice day FBO.

Requirement. Perform V/STOL to an actual or simulated air facility (100-feet by 3,000-feet maximum landing area). Instruction shall emphasize FOD avoidance procedures, line-up control and accurate touch down point and ground speed. A minimum of 4 takeoff and landings is required for completion.

Performance Standards
Execute all procedures IAW AV-8B NATOPS.
Achieve an average pass grade of 2.5.

Prerequisite. SFBO-420.

External Syllabus Support. Facility or road.

SFBO-422 1.0 R RNWST/NWST S (NS)

Goal. Practice FBO at night.

Requirement. Perform V/STOL to an air facility at night. Instruction shall include landing area lighting, FOD avoidance procedures, and emergency procedures. A minimum of 6 takeoffs and landings is required for completion.

Performance Standards
Execute all procedures IAW AV-8B NATOPS and ANTTP 3-22.1-AV8B.
Achieve an average pass grade of 2.5.

Prerequisite. SFBO-420, (NS-255 if aided).

FBO-423 2.0 R 1 AV-8B A (NS)

Goal. Practice FBO at night.

Requirement. Perform V/STOL to an actual or simulated air facility (100-feet by 3,000-feet maximum landing area). Instruction shall emphasize FOD avoidance procedures, line-up control and accurate touch down point and ground speed. A minimum of 4 takeoff and landings is required for completion.

Performance Standards
Execute all procedures IAW AV-8B NATOPS and ANTTP 3-22.1-AV8B.
Achieve an average pass grade of 2.5.

Prerequisite. FBO-421, SFBO-422.

External Syllabus Support. Facility or road.

7. Advanced LAT

a. Purpose. Develop proficiency in LAT procedures in section. Complete NSQ Low qualification.

b. General

(1) All training shall be conducted IAW NAVMC DIR 3500.14, Aviation Training and Readiness Manual, Chapter 4, Rules of Conduct.

(2) All mission planning and flight briefs shall include BAM/BASH data and current route obstructions and consideration.

(3) Non-NSQ Low pilots shall be LAT and NSQ-Hi prior to NSQ Low training (LAT 432-437).

(4) A LATI shall instruct LAT-430 and LAT-431 initial training.

(5) A NSLATI shall instruct SLAT-432 through LAT-437 initial training.

c. Ground/Academic Training

(1) Readings. None.

(2) Lectures. Receive the following MAWTS-1 Common Courseware lecture by a NSLATI: NS LAT Considerations

(3) Chalk Talks/Practical Application. None.

(4) Exams. None.

e. Flight and Simulator Event Training. (8 Events, 9.8 Hours).

LAT-430 1.3 2 AV-8B A

Goal. Low altitude target area tactics.

Requirement. Complete 3 low altitude section attacks.

Performance Standards

Maintain a minimum 200-foot clearance of all obstructions.

Execute all procedures IAW Air NTTP 3-22.1-AV8B.

Adhere to LAT Rules of Conduct.

Execute briefed air-to-surface timeline.

Comply with Tactical Abort Parameters.

Valid weapon release IAW AIR NTTP 3-22.1-AV8B.

Correct ALSA Communication Brevity.

Proficient cockpit management including TCT and MCT.

Prerequisite. LAT-223.

Ordnance. High drag, free fall ordnance and expendables.

Range Requirements. LAT, TGT, HE or INERT.

LAT-431

1.3 R 2 AV-8B A

Goal. Introduce low altitude threat countertactics in section.

Requirement. Practice threat countertactics at low altitude in section. Emphasize threat recognition, identification and assessment, decision points based on threat matrix, ALSA Communication Brevity, and reactions versus threat engagement timeline.

Performance Standards

Maintain a minimum of 200-foot clearance of all obstructions. Execute all LAT and procedures IAW Air NTTP 3-22.1-AV8B. Adhere to surface-to-air threat countertactics gameplan. Adhere to LAT Rules of Conduct. Execute briefed air-to-surface timeline. Comply with Tactical Abort Parameters. Valid weapon release IAW AIR NTTP 3-22.1-AV8B. Correct ALSA Communication Brevity. Proficient cockpit management including TCT and MCT.

Prerequisite. AS-243, LAT-430.

Ordinance. High drag, free fall ordnance and expendables.

Range Requirements. LAT, MTR.

SLAT-432

1.0 NWST/RNWST S NS

Goal. Introduce basic and advanced NS LAT.

Requirement. Perform basic and advanced LAT procedures on a closed LAT circuit at night in a mountainous database. Demonstrate low angle, high illumination NVD problems. Practice straight and level flight, 4 level turns, 2 ridgeline crossings, terrain masking, and climb-to-cope. Practice 1 transition to LAT, 2 SOJ, 2 TOJ, 2 ROJ, 2 guns jink, and 2 break turns. Instruction shall emphasize TCT and MCT; efficient scan techniques that enable aerodynamic, vector, and altitude control; adherence to the 10-degree rule, 50% rule, and dive recovery rules.

Performance Standards

Maintain a minimum of 100-foot clearance of all obstructions. Execute all procedures IAW Air NTTP 3-22.1-AV8B. Adhere to LAT Rules of Conduct. Correct ALSA Communication Brevity. Proficient cockpit management including TCT and MCT.

Prerequisite. SLAT-431, NS-255.

SLAT-433

1.0

R NWST/RNWST S NS

Goal. Review basic and advanced NS LAT. Introduce target attacks and threat countertactics in the LAT environment.

Requirement. Review all basic and advanced LAT procedures and threat countertactics at night. Perform 2 attacks at low altitude at night. Instruction shall emphasize sensor management, deconfliction, mutual support, standardized communications, threat recognition, identification and assessment, decision points on a threat matrix, and reactions versus threat engagement timeline.

Performance Standards

Maintain a minimum of 100-foot clearance of all obstructions.
Execute all procedures IAW Air NTTP 3-22.1-AV8B.
Adhere to surface-to-air threat countertactics gameplan.
Adhere to LAT Rules of Conduct.
Execute briefed air-to-surface timeline.
Comply with Tactical Abort Parameters.
Valid weapon release IAW AIR NTTP 3-22.1-AV8B.
Correct ALSA Communication Brevity.
Proficient cockpit management including TCT and MCT.

Prerequisite. SLAT-432.

LAT-434

1.3

2 AV-8B A NS

Goal. Introduce basic NS LAT.

Requirement. As a chased aircraft, perform basic LAT procedures at night on closed LAT circuit. Practices straight and level flight, 4 level turns, sustained and hard turns, ridgeline crossings, terrain masking, and climb-to-. Instruction shall emphasize TCT and MCT; and efficient scan techniques which enable aerodynamic, vector, and altitude control.

Performance Standards

Maintain a minimum 200-foot clearance of all obstructions.
Execute all procedures IAW Air NTTP 3-22.1-AV8B.
Adhere to LAT Rules of Conduct.
Correct ALSA Communication Brevity.
Proficient cockpit management including TCT and MCT.

Prerequisite. SLAT-433.

Range Requirements. LAT.

LAT-435

1.3

R 2 AV-8B A NS

Goal. Introduce advanced NS LAT.

Requirement. As a chased aircraft, perform all basic and advanced LAT procedures, including 1 target attack at night on a closed LAT circuit. Instruction shall emphasize TCT and MCT, sensor management, threat recognition, identification and

assessment, decision points on a threat matrix, and reactions versus threat engagement timeline.

Performance Standards

Maintain a minimum of 200-foot clearance of all obstructions.
Execute all procedures IAW Air NTTP 3-22.1-AV8B.
Adhere to surface-to-air threat countertactics gameplan.
Adhere to LAT Rules of Conduct.
Execute briefed air-to-surface timeline.
Comply with Tactical Abort Parameters.
Valid weapon release IAW AIR NTTP 3-22.1-AV8B.
Correct ALSA Communication Brevity.
Proficient cockpit management including TCT and MCT.

Prerequisite. LAT-434.

Ordinance. ALQ-164 and self-protect expendable.

Range Requirements. LAT.

LAT-436

1.3 2 AV-8B A NS

Goal. Introduce NS LAT as a wingman.

Requirement. As a wingman, perform basic and advanced LAT in section planned LAT circuit. Instruction shall emphasize MCT, position keeping, mutual support, deconfliction, and roles/responsibilities.

Performance Standards

Maintain a minimum of 200-foot clearance of all obstructions.
Maintain formation parameters IAW AV-8B TACSOP.
Execute all procedures IAW Air NTTP 3-22.1-AV8B.
Adhere to LAT Rules of Conduct.
Correct ALSA Communication Brevity.
Proficient cockpit management including TCT and MCT.

Prerequisite. LAT-435.

Range Requirements. LAT.

LAT-437

1.3 R 2 AV-8B A NS

Goal. Introduce target area tactics at low altitude at night.

Requirement. As a lead and then wingman, execute 2 target attacks at low altitude. Practice section threat countertactics at low altitude. Instruction shall emphasize TCT and MCT, attack geometry, mutual support, and standardized communications.

Performance Standards

Maintain a minimum of 200-foot clearance of all obstructions.
Execute all procedures IAW Air NTTP 3-22.1-AV8B.
Adhere to surface-to-air threat countertactics gameplan.
Adhere to LAT Rules of Conduct.
Execute briefed air-to-surface timeline.

Comply with Tactical Abort Parameters.
Valid weapon release IAW AIR NTTP 3-22.1-AV8B.
Correct ALSA Communication Brevity.
Proficient cockpit management including TCT and MCT.

Prerequisite. LAT-436.

Ordnance. Simulated free fall ordnance and expendables.

Range Requirements. LAT, TACTS, HE or INERT, TGT.

8. Assault Support Escort (ASE)

- a. Purpose. Develop proficiency in ASE.
- b. General. A Section Lead shall instruct all events.
- c. Ground/Academic Training

(1) Readings

(a) Air NTTP 3-22.1-AV8B

- 1. Chapter 12, Tactical Recovery of Aircraft and Personnel
- 2. Chapter 20, Assault Support Escort

(b) AV-8B TACSOP

- 1. Assault Support Escort
- 2. Tactical Recovery of Aircraft and Personnel

(2) Lectures. Receive the following MAWTS-1 Common Courseware
lecture: Assault Support Escort

(3) Chalk Talk/Practical Application. None.

(4) Exams. None.

d. Flight and Simulator Event Training. (1 Events, 1.3 Hours).

ASE-440 1.3 R 2+ AV-8B A (NS)

Goal. Perform ASE.

Requirement. Perform ASE. Planning and briefing shall include mission tasking; attached, detached, and/or combined escort gameplans; execution checklist integration; communication plan; assault routing; air-to-air and/or surface-to-air threat engagement gameplans; actions at the landing zone; initial terminal guidance (ITG); fires coordination, ROE, and AMC and EFL roles/responsibilities. Scenario must include either an actual or simulated surface-to-air or air-to-air threat.

Performance Standards

Execute all tasking (CAS, AR, NTISR, and/or AAW) IAW Air NTTP 3-22.1-AV8B.

Maintain awareness of the assault package and status of execution checklist.

Adhere to ROE and briefed fires coordination gameplan.

Prerequisite. Complete Ground/Academic training, CAS-307, AR-313.

Ordnance. TPOD, Free fall ordnance or PGM and expendables.

Range Requirements. RSTD, JCAS, LGB or JDAM.

External Syllabus Support. Assault support assets.

9. Ground Convoy Escort (GCE)

a. Purpose. Develop proficiency in GCE.

b. General. A Section Lead shall instruct all events.

c. Ground/Academic Training

(1) Readings. AV-8B TACSOP. Ground Convoy Escort

(2) Lectures. None.

(3) Chalk Talk/Practical Application. None.

(4) Exams. None.

d. Flight and Simulator Event Training. (1 Event, 1.3 Hours).

GCE-441 1.3 R 2+ AV-8B A (NS)

Goal. Perform GCE.

Requirement. Perform ground escort. Planning and briefing shall include mission tasking; convoy objectives; attached, detached, and/or combined escort gameplans; communication plan; convoy routing; surface threat to the convoy; convoy actions on contact; fires coordination, ROE, and Convoy Commander roles/responsibilities.

Performance Standards

Execute all tasking (CAS, AR, NTISR) IAW Air NTTP 3-22.1-AV8B.

Maintain awareness of the convoy.

Adhere to ROE and briefed fires coordination gameplan.

Prerequisite. Complete Ground/Academic training, CAS-307, AR-312.

Ordnance. TPOD, simulated free fall ordnance or PGM and expendables.

Range Requirements. RSTD, EXP.

External Syllabus Support. Ground convoy.

10. Low Altitude OAS

a. Purpose. Develop proficiency in CAS and AI execution during day and night missions at low altitude in a medium to high threat environment.

b. General. A Section Lead shall instruct all events.

c. Ground/Academic Training

(1) Readings. Air NTTP 3-22.1-AV8B.

(a) Review Chapter 8, Deep Air Support

(b) Review Chapter 9, Close Air Support

(2) Lectures. None.

(3) Chalk Talks/Practical Application

(a) Low Altitude CAS execution

(b) Low Altitude AI execution

d. Flight and Simulator Event Training. (2 Events, 2.6 Hours).

OAS-450 1.3 R 2 AV-8B A (NS)

Goal. Introduce CAS at low altitude, day or night.

Requirement. Conduct 2 attacks under Type 1, 2, or 3 terminal attack control. Emphasize systems management, target PID, target area tactics, reactive weaponeering, threat countertactics and standardized communications.

Performance Standards

Execute IAW with JPub 3-09.3.

Execute IAW Air NTTP 3-22.1-AV8B.

Execute briefed air-to-surface timeline.

Execute briefed surface-to-air threat countertactics.

Valid weapon release IAW Air NTTP 3-22.1-AV8B.

Comply with Tactical Abort Parameters.

Weapon impacts within CEP.

Correct ALSA Communication Brevity.

TOT +/- 15 seconds.

Prerequisite. LAT-431, CAS-307, (LAT-437 if flown at night).

Ordnance. TPOD, high drag free fall ordnance, ALQ-164, and expendables.

Range Requirements. LAT, HE or INERT, JCAS.

OAS-451 1.3 R 2+ AV-8B A (NS)

Goal. Introduce AI at low altitude. threat.

Requirement. Conduct a low altitude AI with a surface-to-air and air-to-air threat.

Performance Standards

Adhere to ACM training rules.
Execute IAW Air NTTP 3-22.1-AV8B.
Execute briefed air-to-surface timeline.
Execute briefed surface-to-air threat countertactics.
Weapon impact within +/- 15 seconds of TOT.
Valid weapon release IAW Air NTTP 3-22.1-AV8B.
Comply with Tactical Abort Parameters.
Weapon impacts within CEP.
Communicate an accurate MISREP to the MACCS.
Correct ALSA Communication Brevity.

Prerequisite. AI-353, LAT-431, (LAT-437 if flown at night).

Ordnance. TACTS pod, CAIM-9M-8, free fall ordnance, ALQ-164, and expendables.

Range Requirements. TACTS, TGT, HE or INERT, LSR, AA.

External Syllabus Support. AIC, RADAR equipped adversary.

11. Non-Traditional ISR (NTISR)

- a. Purpose. Develop proficiency executing Non-Traditional ISR.
- b. General. A Section Lead shall instruct all events.
- c. Ground/Academic Training. None.
- d. Flight and Simulator Event Training. (1 Event, 1.3 Hours).

NTISR-460 1.3 R 2 AV-8B A (NS)

Goal. Perform Non-traditional ISR.

Requirement. Conduct NTISR. Planning and briefing shall include detailed mission tasking; detailed waypoint plan to support intelligence objectives; detailed sensor footprint and supporting flight profile; sensor FOV/Zoom plan, optics/polarity plan, RADAR mapping plan; and data collection and communication requirements. Debrief with tasking unit including 8mm tape review and capture.

Performance Standards

Execute all mission tasking IAW Air NTTP 3-22.1-AV8B.

Prerequisite. AS-244, (NS-255 if flown at night).

Ordnance. TPOD.

Range Requirements. RSTD, RECCE ARRAY, COMPLEX.

12. Large Force Exercise (LFE)

- a. Purpose. Develop proficiency integrating in a LFE under daylight or night conditions.

b. General

(1) The LFE shall include at least 4 of following assets: strike element, sweep element, SEAD element, EA/ES assets, AAR assets, and command and control assets.

(2) The LFE shall include a surface-to-air and/or air-to-air threat.

(3) A Mission Commander shall instruct all events.

c. Ground/Academic Training. None.

d. Flight and Simulator Event Training. (2 Events, 2.6 Hours).

LFE-470

1.3

4+ AV-8B A

Goal. Execute a day LFE.

Requirement. Complete a day LFE.

Performance Standards

Execute all mission tasking IAW Air NTTP 3-22.1-AV8B.
Adhere to all applicable Rules of Conduct and Training Rules.
Adhere to air-to-surface and/or air-to-air timelines.
Adhere to surface-to-air and/or air-to-air threat
countertactics gameplans.
100% valid air-to-surface and/or air-to-air weapon releases.
Correct ALSA Communication Brevity.

Prerequisite. AI-353.

Ordinance. JDAM or LGB, CATM-9M-8, TACTS, and expendables.

Range Requirements. TACTS, WISS, JDAM or LGB, EXP, COMPLEX.

External Syllabus Support. Per scenario.

LFE-471

1.3

R 4+ AV-8B A NS

Goal. Execute a night LFE.

Requirement. Complete a night LFE.

Performance Standards

Execute all mission tasking IAW Air NTTP 3-22.1-AV8B.
Adhere to all applicable Rules of Conduct and Training Rules.
Adhere to air-to-surface and/or air-to-air timelines.
Adhere to surface-to-air and/or air-to-air threat
countertactics gameplans.
100% valid air-to-surface and/or air-to-air weapon releases.
Correct ALSA Communication Brevity.

Prerequisite. AI-353.

Ordnance. JDAM or LGB, CATM-9M-8, TACTS, and expendables.

Range Requirements. TACTS, WISS, JDAM or LGB, EXP, COMPLEX.

External Syllabus Support. Per scenario.

13. Forward Air Controller (Airborne) FAC(A)

a. Purpose. Complete FAC(A) qualification.

b. General

(1) The JCAS AP MOA 2004-02 (referred to as the JFAC(A) MOA) provides the minimum standard for certification and qualification as a FAC(A). Meeting the T&R syllabus requirements for FAC(A) will meet the JFAC(A) MOA requirements. The JFAC(A) MOA can be found on the SIPRNET at <http://jfaca.mawts-1.usmc.smil.mil>.

(2) Prior to beginning this stage, AV-8B pilots shall be either a division leader with prior ground FAC or FAC(A) experience or a Mission Commander.

(3) Upon completion of FAC(A)-490, with JFAC(A) MOA requirements met, the commanding officer may issue a T&R FAC(A) qualification and a JFAC(A) MOA FAC(A) certification.

(4) Unqualified pilots will fly FAC(A)-480 through FAC(A)-490 with a MAWTS-1 certified FAC(A)I designated by the commanding officer. The FAC(A)I will fly in the escort aircraft. F/A-18D FAC(A)I aircraft may be used to fulfill this requirement. The FAC(A)I may simulate the GFAC/JTAC if one is not available.

(5) FAC(A)-491 through FAC(A)-496 are not required for initial FAC(A) qualification.

(6) A non-qualified FAC(A) pilot must have a FAC(A)I in the section and may not control CAS aircraft delivering actual ordnance closer than the most conservative of minimum safe distance, 1000 meters, or range regulations. A FAC(A) qualified pilot may not employ CAS aircraft delivering actual ordnance closer than the most conservative of minimum safe distance or range regulations.

(7) FAC(A)-480 through FAC(A)-487 are work-up events. The FAC(A)I may brief any sortie, however the intent is for the FAC(A) under instruction to develop planning, briefing and debriefing skills throughout the syllabus.

(8) FAC(A)-488 through FAC(A)-490 are exercises in integrating the fire support assets previously controlled separately. The intent is to expose prospective FAC(A) pilots to the unique challenges posed by each asset when integrated with fixed wing CAS. Each sortie should concentrate on the integration procedures for a different asset, culminating in a final checkride, FAC(A)-490, using multiple fire support assets. If FAC(A)-488 integrates IDFS assets, FAC(A)-489 should integrate RW/UAV CAS and vice versa. If RW/UAV assets are integrated, emphasis is on combined or sectorized sequential attacks. If IDFS is integrated, emphasis is on altitude or lateral deconfliction of fires effects using standard SEAD templates. At a

minimum, IDFS must be integrated into one of the sorties in the FAC(A)-488 through FAC(A)-490 range, with FAC(A)-488 being the preferred sortie.

(9) Due to the high-task loading nature of the FAC(A) mission, pilots who achieved their initial FAC(A) qualification in an F/A-18D, will complete the entire qualification syllabus in an AV-8B prior to being FAC(A) qualified in an AV-8B squadron.

(10) Failure to meet JFAC(A) MOA proficiency or currency requirements, or loss of proficiency (delinquent re-fly factor) for all associated FAC(A) qualification events (per paragraph 500.1.b), constitutes loss of the FAC(A) qualification.

(11) Pilots who have lost the FAC(A) qualification due to failure to meet JFAC(A) MOA Proficiency or Currency requirements shall regain the FAC(A) qualification by successfully completing events as delineated in the appropriate T&R syllabus under the supervision of a qualified FAC(A). At a minimum, such pilot must complete the number and category (appropriate night, control type, ordnance, etc.) of controls the individual failed to accomplish during the appropriate Currency or Proficiency period (Currency - 2 controls in 90 days. Proficiency - 6 controls in a six month period; 4 of these 6 controls must be Type 1, 1 control must be at night, and at least 1 must control an asset that expends ordnance).

(12) Pilots who have lost the FAC(A) qualification due to exceeding the re-fly interval in all associated qualification events, or who have been FAC(A) unqualified for 18 consecutive months per the JFAC(A) MOA, shall regain qualification by completing the appropriate Refresher FAC(A) syllabus under the supervision of a FAC(A)I and conduct a minimum of 6 controls (4 of these 6 controls must be Type 1, 1 control must be at night, and at least 1 must control an asset that expends ordnance).

(13) The intent of the T&R re-fly intervals is to meet the JFAC(A) MOA minimum requirements for currency/proficiency controls:

JFAC(A) MOA requirements				
Interval	Controls	Type 1	Night	Ordnance
90 days	2	*	*	*
180 days	6	4	1	1
Initial Certification	12	8	1	4
* No specified requirements in these areas for this interval				

(14) Escort aircraft that are not flown by a FAC(A)I conducting instruction during a FAC(A) workup will log a ESC-496. Escort aircraft that are flown by a FAC(A)I conducting instruction during a FAC(A)/FAC(A)I workup will log the appropriate FAC(A) code and log the FAC(A) controls. AV-8B FAC(A)s should fly as a section, while the escort for an AV-8B FAC(A) will be a qualified section lead. Escort aircraft shall not fulfill the external support requirement of a fixed wing CAS element for any FAC(A) qualification workup sortie.

- c. Ground/Academic Training. Refer to JFAC(A) MOA.
- d. Flight and Simulator Event Training. (15 Events, 18.9 hours).

SFAC(A)-480 1.0 RNWST/NWST S

Goal. Type 1, 2, and 3 control procedures.

Requirement. Perform type 1, 2, and 3 controls. Emphasize C3 integration, target area flow and timing; sensor management, and Crew Resource Management. Execute 2 type 1, 2 type 2, and 2 type 3 controls. The FAC(A)I shall simulate C3 agencies, TACP and CAS aircraft.

Performance Standards

Execute type 1, 2, and 3 terminal attack control IAW JPub 3-09.3.

Accurate target coordinate and 9-line generation.

Proper coordination and approval for CAS attacks.

Effective FAC(A) aircraft position to provide marking and control with consideration of threat and friendly positions.

Correct ALSA Communication Brevity.

Prerequisite. Complete Ground/Academic training, CAS-307, SCAR-321.

SFAC(A)-481 1.0 RNWST/NWST S (NS)

Goal. Adverse weather, high-threat control procedures.

Requirement. Perform type 1 high-threat controls. Emphasize C3 integration, target area flow, integration, and timing; sensor management, and Crew Resource Management. Execute 4 type 1 controls. A SEAD CFF mission shall be given for each TOT. The FAC(A)I shall simulate C3 agencies, TACP, indirect fire assets and CAS aircraft. Weather is overcast at 8,000-feet.

Performance Standards

Execute type 1 terminal attack control IAW JPub 3-09.3.

Accurate target coordinate and 9-line generation.

Proper coordination and approval for IDF and CAS attacks.

Effective FAC(A) aircraft position to provide marking and control with consideration of threat and friendly positions.

Correct ALSA Communication Brevity.

Prerequisite. SFAC(A)-480.

FAC(A)-482 1.3 2 AV-8B A

Goal. Introduce type 1 and 2 control procedures of fixed wing CAS assets in a low-threat environment.

Requirement. On a tactical range, perform visual/sensor reconnaissance of 3 separate targets and generate target coordinates with aircraft systems. Plot each target on gridded imagery/chart. Perform authentication procedures. Perform 2 type 1 and 2 type 2 controls of fixed wing aircraft utilizing level and roll-in delivery profiles. Deliver or coordinate LASER mark on target and guide 1 LGW to impact. Provide BHA. If a range that permits Type 2 control is not

available, type 2 control may be evaluated with simulated deliveries.

Performance Standards

Executes appropriate search, detection, and PID profiles.
Execute type 1 and 2 terminal attack control IAW JPub 3-09.3.
Accurate target coordinate and 9-line generation.
Proper coordination and approval for CAS attacks.
Effective FAC(A) aircraft position to provide marking and control with consideration of threat and friendly positions.
Successfully provides LASER mark guiding LGW to impact.
Correct ALSA Communication Brevity.

Prerequisite. SFAC(A)-481.

Ordinance. TPOD, expendables.

Range Requirements. RSTD, LSR, HE. JCAS, JDAM, LGB.

External Syllabus Support. Fixed wing CAS with live, inert or captive PGM; GFAC or JTAC.

FAC(A)-483

1.3 R 2 AV-8B A

Goal. Introduce type 1 and 3 control procedures of fixed wing CAS assets with GP ordnance in a low-threat environment.

Requirement. On a tactical range, perform visual/sensor reconnaissance of 3 separate targets and generate target coordinates with aircraft systems. Plot each target on gridded imagery/chart. Perform authentication procedures. Perform 3 type 1 and 1 type 3 controls of fixed wing aircraft with GP ordnance. Deliver or coordinate marking rounds with at least 1 mark via aircraft ordnance. Provide talk-ons and corrections. Provide BHA.

Performance Standards

Executes appropriate search, detection, and PID profiles.
Execute type 1 and 3 terminal attack control IAW JPub 3-09.3.
Accurate target coordinate and 9-line generation.
Marks target within 300 meters.
Accurate talk-ons and corrections from the mark.
Proper coordination and approval for CAS attacks.
Effective FAC(A) aircraft position to provide marking and control with consideration of threat and friendly positions.
Correct ALSA Communication Brevity.

Prerequisite. SFAC(A)-481.

Ordinance. TPOD, Rockets, and expendables.

Range Requirements. RSTD, LSR, HE. JCAS, JDAM, LGB.

External Syllabus Support. Fixed wing CAS asset(s) with live or inert GP ordnance, GFAC/JTAC.

FAC(A)-484 1.3 2 AV-8B A (NS)

Goal. Introduce type 1, 2, and 3 control procedures of rotary wing CAS assets in a low-threat environment.

Requirement. On a tactical range, perform visual/sensor reconnaissance of 3 separate targets and generate target coordinates with aircraft systems. Plot each target on gridded imagery/chart. Perform authentication procedures. Perform 2 type 1, 2 type 2, and 1 type 3 controls of rotary wing aircraft. Deliver marking rounds or talk-on (rockets, guns, TOW); or provide LASER designation (Hellfire). For type 1 controls of rockets or guns, emphasize providing corrections, ensuring compliance with limit-of-advance, and providing threat lookout for rotary wing assets in the target area. For type 1 controls of TOW, emphasize target sort and ensuring no friendlies in the SDZ. Two, actual or simulated, TOW and/or Hellfire controls are required for completion. One of the 2 controls must have the FAC(A) lasing the Hellfire. Provide BHA.

Performance Standards

Executes appropriate search, detection, and PID profiles.
Execute type 1, 2, and 3 terminal attack control IAW JPub 3-09.3.
Accurate target coordinate and 9-line generation.
Marks target within 300 meters.
Accurate talk-ons and corrections from the mark.
Proper coordination and approval for CAS attacks.
Effective FAC(A) aircraft position to provide marking and control with consideration of threat and friendly positions.
Correct ALSA Communication Brevity.

Prerequisite. SFAC(A)-481.

Ordinance. TPOD, free fall or forward firing GP ordnance, expendables.

Range Requirements. RSTD, LSR, HE, JCAS, JDAM, LGB.

External Syllabus Support. Rotary wing CAS asset(s) with live/captive Hellfire, GFAC/JTAC.

FAC(A)-485 1.3 2 AV-8B A (NS)

Goal. Introduce type 1, 2, and 3 control procedures in an urban environment.

Requirement. In an urban environment, perform visual/sensor reconnaissance of 3 separate targets and generate target coordinates with aircraft systems. Plot each target on Gridded Reference Graphic (GRG). Perform authentication procedures. Perform 2 type 1 and 2 type 2/3 controls of aircraft. Deliver or coordinate marking rounds as required. Provide GRG based talk-ons and corrections. Provide BHA.

Performance Standards

Executes appropriate search, detection, and PID profiles.
Execute type 1, 2, and 3 terminal attack control IAW JPub 3-09.3.
Accurate target coordinate and 9-line generation.
Accurate GRG talk-ons.
Proper coordination and approval for CAS attacks.
Effective FAC(A) aircraft position to provide marking and control with consideration of threat and friendly positions.
Correct ALSA Communication Brevity.

Prerequisite. SFAC(A)-481.

Ordnance. TPOD, expendables.

Range Requirements. RSTD, LSR, HE, JCAS, JDAM, LGB, URBN WPNS.

External Syllabus Support. CAS asset(s), GFAC/JTAC.

FAC(A)-486

1.3 2 AV-8B A (NS)

Goal. Introduce mortar/artillery airspot.

Requirement. On a tactical range, perform visual/sensor reconnaissance of 3 separate targets and generate target coordinates with aircraft systems. Plot targets on gridded imagery/chart and prepare call-for-fire briefs. Emphasize accurate call-for-fire communications and adjustment procedures. Execute 1 LASER adjust fire, 1 immediate suppression, 1 SEAD mission, and 1 high threat SEAD mission. Emphasize high-threat airspot and positioning to provide redundant mark and accurate corrections for IDFS. Simulated weather is overcast at 8,000-feet MSL. Both SEAD missions must include marking and suppressing targets.

Performance Standards

Executes appropriate search, detection, and PID profiles.
Proper communication format with the firing unit.
Provide timely and accurate corrections to the firing unit.
Complete an immediate suppression CFF within 60 seconds of receiving the mission from the FAC/FO.
Correct ALSA Communication Brevity.

Prerequisite. SFAC(A)-481.

Ordnance. TPOD, expendables .

Range Requirements. RSTD, LSR, HE, JCAS, JDAM, LGB.

External Syllabus Support. IDFS asset and GFAC or FO. IDFS asset requires a minimum of 10 HE rounds, 2 WP rounds, and 8 illumination rounds.

FAC(A)-487 1.3 R 2 AV-8B A NS

Goal. Introduce type 1 and 2 control procedures at night in a low threat environment.

Requirement. On a tactical range, perform visual/sensor reconnaissance of 3 separate targets and generate target coordinates with aircraft systems. Plot each target on gridded imagery/chart. Perform authentication procedures. Control 2 Type 1 and 2 Type 2 attacks by fixed wing aircraft. Deliver or coordinate marks. At least 1 Type 1 control must use an IR pointer. At least 1 Type 1 control must be supported by air-delivered illumination. Provide BHA. If a range that permits Type 2 control is not available, Type 2 control may be evaluated with simulated deliveries.

Performance Standards

Executes appropriate search, detection, and PID profiles.
Execute type 1, and 2 terminal attack control IAW JPub 3-09.3.
Accurate target coordinate and 9-line generation.
Proper coordination and approval for CAS attacks.
Effective FAC(A) aircraft position to provide marking and control with consideration of threat and friendly positions.
Correct ALSA Communication Brevity.

Prerequisite. FAC(A)-482 through FAC(A)-486.

Ordnance. TPOD, free fall or forward firing munitions, 4 LUU-2/19, expendables.

Range Requirements. RSTD, LSR, HE. JCAS, JDAM, LGB.

External Syllabus Support. Fixed Wing CAS assets, GFAC/JTAC.

FAC(A)-488 1.3 R 2 AV-8B A

Goal. Introduce asset integration procedures in a day, medium threat environment.

Requirement. On a tactical range, perform visual/sensor reconnaissance of 3 separate targets and generate target coordinates with aircraft systems. Plot each target on gridded imagery/chart. Perform authentication procedures. Control 4 type 1 attacks by fixed wing aircraft employing medium threat tactics. A minimum of 2 attacks shall be pop-up attacks. Deliver or coordinate marks. Provide BHA.

Performance Standards

Executes appropriate search, detection, and PID profiles.
Execute type 1 terminal attack control IAW JPub 3-09.3.
Accurate target coordinate and 9-line generation.
Proper coordination and approval for CAS attacks.
Effective FAC(A) aircraft position to provide marking and control with consideration of threat and friendly positions.
Correct ALSA Communication Brevity.

Prerequisite. FAC(A)-487.

Ordnance. TPOD, free fall or forward firing ordnance, expendables.

Range Requirements. RSTD, LSR, HE. JCAS, JDAM, LGB.

External Syllabus Support. 1 fixed wing asset and 1 additional fire support asset (RW CAS, UAV, or IDFS) and GFAC/JTAC.

FAC(A)-489

1.3 R 2 AV-8B A NS

Goal. Introduce asset integration procedures in a night, medium threat environment.

Requirement. On a tactical range, perform visual/sensor reconnaissance of 3 separate targets and generate target coordinates with aircraft systems. Plot each target on gridded imagery/chart. Perform authentication procedures. Control 2 type 1 and 2 type 2 by fixed wing aircraft employing medium threat tactics. Provide BHA. If a range that permits type 2 control is not available, Type 2 control may be evaluated with simulated deliveries.

Performance Standards

Executes appropriate search, detection, and PID profiles.
Execute type 1 and 2 terminal attack control IAW JPub 3-09.3.
Accurate target coordinate and 9-line generation.
Proper coordination and approval for CAS attacks.
Effective FAC(A) aircraft position to provide marking and control with consideration of threat and friendly positions.
Correct ALSA Communication Brevity.

Prerequisite. FAC(A)-488.

Ordnance. TPOD, free fall or forward firing munitions, expendables.

Range Requirements. RSTD, LSR, HE. JCAS, JDAM, LGB.

External Syllabus Support. 1 fixed wing asset and 1 additional fire support asset (RW CAS, UAV, or IDFS) and GFAC/JTAC.

FAC(A)-490

1.3 R 2 AV-8B A (NS)

Goal. Practice multiple assets and supporting arms integration.

Requirement. Perform visual/sensor reconnaissance, generating target coordinates with aircraft systems. Plot targets on gridded imagery/chart and prepare target briefs. Plan and execute at least 1 integrated attack utilizing 3 or more elements. For fixed wing, rotary wing, or UAV integration, emphasize conducting a sectorized simultaneous or combined sequential attack. For IDFS integration, time, altitude or lateral deconfliction can be used.

Performance Standards

Executes appropriate search, detection, and PID profiles.
Execute type 1, 2, and 3 terminal attack control IAW JPub 3-09.3.
Accurate target coordinate and 9-line generation.
Proper coordination and approval for attacks.
Effective FAC(A) aircraft position to provide marking and control with consideration of threat and friendly positions.
Correct ALSA Communication Brevity.

Prerequisite. FAC(A)-489.

Ordnance. TPOD, free fall or forward firing ordnance, expendables.

Range Requirements. RSTD, LSR, HE. JCAS, JDAM, LGB.

External Syllabus Support. 3 fire support assets, GFAC/JTAC.

FAC(A)-491 1.3 2 AV-8B A (NS)

Goal. Introduce adverse weather procedures in an high-threat environment.

Requirement. On a tactical range, perform visual/sensor reconnaissance of 3 separate targets and generate target coordinates with aircraft systems. Plot each target on gridded imagery/chart. Perform authentication procedures. Control 2 Type 1 pop-up attacks and 2 Type 2 attacks by fixed wing aircraft. Deliver or coordinate marks. Provide BHA. If a range that permits Type 2 control is not available, Type 2 control may be evaluated with simulated deliveries. Simulated weather is overcast at 8,000-feet AGL. May be flown at night if previously flown during the day.

Performance Standards

Executes appropriate search, detection, and PID profiles.
Execute type 1 and 2 terminal attack control IAW JPub 3-09.3.
Accurate target coordinate and 9-line generation.
Proper coordination and approval for attacks.
Effective FAC(A) aircraft position to provide marking and control with consideration of threat and friendly positions.
Correct ALSA Communication Brevity.

Prerequisite. FAC(A)-490.

Ordnance. TPOD, free fall or forward firing ordnance, expendables.

Range Requirements. RSTD, LSR, HE. JCAS, JDAM, LGB.

External Syllabus Support. 1 fixed wing asset, 1 IDFS asset and GFAC/JTAC.

FAC(A)-492 1.3 2 AV-8B A (NS)

Goal. Introduce UAV/UCAV Integration.

Requirement. Perform visual/sensor reconnaissance on 3 tactical targets, generating target coordinates with aircraft systems. Execute 1 LASER spot/target handoff from a UAV/UCAV. Plot targets on gridded imagery/chart and prepare an attack brief. Control 2 type 2 and 2 Type 3 attacks by UAV/UCAV aircraft. Perform authentication procedures. Deliver or coordinate LASER mark on target and guide 1 LGW to impact. Provide BHA and coordinate with UAV/UCAV to provide BHA. If a range that permits Type 2 control is not available, Type 2 control may be evaluated with simulated deliveries.

Performance Standards

Executes appropriate search, detection, and PID profiles.
Execute type 2 and 3 terminal attack control IAW JPub 3-09.3.
Accurate target coordinate and 9-line generation.
Proper coordination and approval for attacks.
Effective FAC(A) aircraft position to provide marking and control with consideration of threat and friendly positions.
Correct ALSA Communication Brevity.

Prerequisite. FAC(A)-490.

Ordinance. TPOD, expendables.

Range Requirements. RSTD, LSR, HE, JCAS, JDAM, LGB.

External Syllabus Support. LGW capable UAV/UCAV, GFAC/JTAC.

FAC(A)-493

1.3 2 AV-8B A (NS)

Goal. Introduce Naval Surface Fire Support airspot.

Requirement. Perform visual/sensor reconnaissance on 3 tactical targets, generating target coordinates with aircraft systems. Plot targets on gridded imagery/chart and prepare a call-for-fire brief. Emphasize accurate call-for-fire communications and adjustment procedures. Execute 1 adjust fire and 2 mark and SEAD missions.

Performance Standards

Executes appropriate search, detection, and PID profiles.
Employs proper communications format with the firing unit.
Provides timely and accurate corrections to the firing unit.
Requires 4 rounds or fewer to achieve a bracket sufficient for a Fire For Effect.

Prerequisite. FAC(A)-490.

Ordinance. TPOD, expendables.

Range Requirements. RSTD, LSR, HE, JCAS, JDAM, LGB.

External Syllabus Support. Naval Surface Fire Support asset, GFAC/FO/NGLO.